ABSTRACT

Methods and apparatus for storing and retrieving data. In one implementation, a system includes: a data source, providing data in a first order; a data destination, receiving data in a second order; at least four memories, each having memory pages, data stored to at least two memories and retrieved from at least two memories in parallel, each buffer page having entries along a first dimension corresponding to the first order and entries along a second dimension corresponding to the second order, data stored in the first order and retrieved in the second order, at least one memory page stores data in multiple locations according to the first and second orders, two data elements consecutive in the first order stored in parallel to the memories, at least two data elements consecutive in the second order retrieved in parallel from the memories.